

AMENDMENTS TO THE SPECIFICATION:

Change page 2, lines 16 to 21, as follows:

In order to achieve the above object, the present inventors diligently conducted repetitive studies, and found that a secondary lithium cell has good cycle characteristics even in a high-voltage region, conventionally said to be overcharging, by simultaneously adding a specific quantity ~~quantities~~ of a plurality of specific metal elements to a lithium cobaltate-based particulate positive electrode active material for secondary lithium cells, or further simultaneously adding fluorine.

Change page 2, line 27 to page 3, line 6, as follows:

In the present invention, although the reason ~~mechanism~~ why good cycle properties can be obtained ~~manifest themselves~~ in the high-voltage region is not quite clear, it is considered that under a high-voltage condition wherein a majority of lithium ions are extracted, the specific metal elements, which are simultaneously added and, which are present on the surface of the particles ~~they~~ are or partially dissolved on the surfaces of particles, may act as the pillars of the crystal lattice to reduce the strain of the crystal lattice caused by phase transition or expansion/contraction, thereby suppressing its deterioration. At the same time, since the chance wherein cobalt atoms directly contact the electrolyte is reduced, and no overcharged states occur locally in the particles, it is considered that deterioration is suppressed.

Change page 3 lines 15 to 22, as follows:

In the present invention, "evenly present" means not only the case wherein each of the above-described elements is ~~are~~ substantially evenly present in the vicinity of the particle surfaces, but also the case where the quantity of each of the above-described elements presents between particles of

substantially the same; and it is sufficient if either one is satisfied, especially, it is preferable that the both are satisfied. Specifically, it is particularly preferable that the quantity of each of the above-described elements is substantially the same, and each of the above-described elements is evenly present on the surface of a particle.

Change page 7, line 21 to page 8, line 1, as follows:

In the particulate positive electrode active material of the present invention, the element A or B, or F must be substantially evenly present on the surfaces of particles thereof. In other words, the element A or B, or F must not be substantially present in the particles. In such a case, since the element A or B, or F is present on the surface of the positive electrode active material, the effect can be obtained ~~manifested~~ by adding ~~the addition of~~ a small quantity. If the element A or B, or F is present in the particles, the effect of the present invention cannot be obtained.

When the element A or B, or F is added in the particles in order to obtain ~~manifest~~ the effect of the present invention, that is, the high capacity and high cycle properties, under the use of high voltage as the positive electrode active material, the addition of a large quantity of the element A or B, or F is required.

Change page 8, lines 12 to 17, as follows:

In such a case, since no cobalt or oxygen atoms are exposed on the particle surface of the positive electrode active material, the effect of the added elements is more preferably obtained ~~manifested~~. As a result, the cycle properties as the positive electrode active material for high voltage uses are effectively improved. The addition of fluorine atoms is preferable because it

has the effect of improving the safety and the cycle properties of the cell.

Change page 9, lines 3 to 11, as follows:

Furthermore, it is preferable that the particulate positive electrode active material of the present invention has a press density of 2.7 to 3.3 g/cm³. If the press density is lower ~~smaller~~ than 2.7 g/cm³, it is not preferable because the initial volume capacity density of the positive electrode when the positive electrode sheet is formed using the particulate positive electrode active material is lowered, and on the contrary, if the press density is higher ~~larger~~ than 3.3 g/cm³, it is not preferable because the initial weight capacity density of the positive electrode is lowered, or the high-rate discharge property is lowered. Above all, the press density of the particulate positive electrode active material is preferably 2.9 to 3.2 g/cm³.

Change page 13, lines 23 to 30, as follows:

After the powder was sputtered for 10 minutes, XPS analysis was conducted ~~conducted~~. The signals of aluminum and zirconium by XPS were attenuated to 10% and 13% the signals before sputtering, respectively. The sputtering is equivalent to surface etching to a depth of about 30 nm. It was known therefrom that aluminum and zirconium were present on the surfaces of the particles. Furthermore, as a result of observation using an SEM (scanning electron microscope), the obtained positive electrode active material formed secondary particles wherein 30 or more primary particles were coagulated.